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S. 104 – Nuclear Waste Policy Act of 1997

Calendar No. 27

Reported by the Committee on Energy and Natural Resources, with amendments, on March 14, 1997, by a vote of 15 to 5. A written report is expected to be filed later.

NOTEWORTHY

- On March 20, the Majority Leader may move to proceed to the consideration of S. 104. It is likely that a cloture motion on the motion to proceed will be required, with a vote after the Senate returns from the scheduled recess.
- S. 104 was introduced on January 9 by Senators Murkowski and Craig with 26 cosponsors. As reported, the bill is nearly identical to S. 1936, as passed by the Senate during the 104th Congress by a 63-37 vote on July 31, 1996. The House version, H.R. 1020, died on the House Calendar at the end of the 104th Congress.
- S. 104 provides for the interim and permanent storage of spent nuclear fuel and high-level radioactive waste, generated either by the commercial nuclear power industry or by the federal government. A short-term storage facility, administered by the Department of Energy (DOE), would have to begin accepting nuclear waste no later than November 30, 1999, at a site known as Yucca Mountain, Nevada. By December 31, 2002, the Department of Energy would be required to apply for authorization to construct a permanent repository at the same site, provided that licensing regulations can be met.
- The Nevada congressional delegation and the State of Nevada consistently have opposed the placing of a nuclear waste site at Yucca Mountain, a remote site used by the federal government for nuclear weapons test explosions for 50 years. This site was approved by Congress in 1987 as the only candidate for a permanent repository.
- No Statement of Administration Policy is available on S. 104. Note that S. 104 contains bipartisan language drafted during the last Congress to address the Administration's stated objection to S. 1936, by requiring that construction of the interim storage facility may not begin before December 31, 1998, and then only under certain conditions.

HIGHLIGHTS

- ◆ S. 104 amends the Nuclear Waste Policy Act of 1982 to establish an interim and long-term nuclear waste disposal plan. This bill establishes a three-part plan for disposal of highly radioactive spent fuel from civilian and government-owned nuclear reactors and from defense activities such as chemical reprocessing of spent nuclear fuel and irradiated targets [both hereinafter in this *Notice* are referred to as “nuclear waste”] through the phased construction of an interim facility and a permanent storage facility [also referred to as “repository”].
- ◆ The interim facility would be at the Nevada Test Site, near Yucca Mountain, Nevada, which is the proposed site for the permanent geologic nuclear waste repository. The bill would eliminate a provision in the 1982 act which forbids siting an interim facility in the same state as the permanent repository. No construction activities may take place on an interim facility at Yucca Mountain before December 31, 1998.
- ◆ An interim facility may be constructed at Yucca Mountain only if the President determines that the site is suitable for a permanent repository. If the President determines Yucca Mountain is not suitable for the repository, all work at the Yucca Mountain site shall cease and the President shall designate a new interim storage site within 18 months, which then must be approved by Congress within two years of his initial determination.
- ◆ S. 104 provides that during a “first phase,” the interim facility shall store up to 15,000 metric tons of nuclear waste beginning no later than November 30, 1999. During the second phase, the interim facility would store 40,000 metric tons with a “trigger” that would expand capacity to 60,000 metric tons if DOE misses any of its milestones with regard to the permanent repository. The second phase would begin accepting deposits by December 31, 2002.
- ◆ If the Administration finds the Yucca Mountain site suitable to serve as the permanent geologic repository, that location would accept deposits by the year 2010.
- ◆ The Energy Secretary would take all actions necessary to ensure safe waste acceptance. Transportation provisions include a requirement that only NRC-certified containers be used; advance notification would be provided to states and local governments of shipments through their jurisdictions; and all state and local laws shall apply to the same extent as to any person engaging in transportation in interstate commerce must comply with those requirements, as provided by the Hazardous Materials Transportation Act.
- ◆ The Committee adopted an amendment that would require the Secretary to apply specified criteria to designate shipping routes for spent nuclear fuel under the Act, and provide technical assistance and funding to states and Indian Tribes for the training of the emergency response teams along those routes.

BACKGROUND

Nuclear power plants provide more than 20 percent of the nation's electric generating capacity. Nuclear reactors were designed with on-site storage pools that were intended to serve as temporary storage facilities. Currently, no permanent storage exists, and so nuclear power plants must store their nuclear waste on site. At this time, about 30,000 metric tons of spent fuel are now in temporary storage at nuclear power plants in some 75 sites in 34 states.

According to last year's committee report, 23 reactors will run out of room in their temporary storage pools by 1998, and an additional 55 will run out of storage space by 2010.

In addition, 2,500 metric tons of spent nuclear fuel and 403,000 cubic meters of high-level nuclear waste has been produced by the federal government through defense and research activities. That spent fuel and waste currently are stored at DOE sites in 11 states. In all, nuclear waste is being stored in at least 80 sites in 41 states.

The 1982 Law

The Nuclear Waste Policy Act of 1982 required the DOE to design and implement a permanent geologic repository for spent nuclear fuel from commercial reactors, but specified no site. It was given a deadline to begin accepting waste by 1998. The law also called for developing plans by 1985 to build "monitored, retrievable storage" facilities as a possible alternative to permanent underground geologic storage. (In 1985, the President determined that defense-related spent fuel could also be disposed of in the same repository.)

To pay for constructing and operating a permanent facility, the law established the Nuclear Waste Fund in the U.S. Treasury. It currently receives about \$630 million per year from collections of a fee paid by ratepayers of nuclear-generated electricity. The fund currently contains almost \$13 billion in tax and interest. In addition, defense funds are annually appropriated to cover the cost of storing defense spent fuel and waste. [Note that S. 104 would convert the fee paid by electricity consumers into a user fee that would be assessed based on the level of appropriations for the year beginning in Fiscal Year 2004 (Sec. 401).]

The 1987 Law

In 1987, Congress passed the Nuclear Waste Policy Amendments Act as part of the 1988 deficit-reduction legislation, and instructed the DOE to study the suitability of the Yucca Mountain site to serve as the permanent repository. That site was one of several DOE had previously identified. The 1987 law authorized DOE to move forward with so-called "site characterization" activities to evaluate the licensability of the site to serve as a repository. The law also authorized a monitored retrievable storage facility, contingent upon the permanent repository being sited and licensed.

Nevada's Response

The state of Nevada subsequently took the issue to court, asserting the state's authority to prevent DOE from proceeding with site characterization activities. Although the state of Nevada lost in a case decided by the Supreme Court, the state succeeded in delaying site characterization activities for several years. Since enactment of the 1987 law, DOE has spent approximately \$3.5 billion in characterizing the Yucca Mountain site (out of total program expenditures of almost \$6 billion since 1982).

Pending Litigation

The Department of Energy in 1994 admitted that it will be unable to meet that 1998 deadline for beginning to accept nuclear waste, as required by the 1982 law. As a result of this, a lawsuit was filed by a group of state regulatory agencies, nuclear utilities and state Attorneys General against DOE for breaching the contracts entered into under the 1982 law (*Indiana Michigan Power Company, et al. v. U.S. Dept. of Energy*). On July 23, 1996, the U.S. Court of Appeals for the District of Columbia decided the case, holding that DOE has an obligation to begin accepting spent nuclear fuel from civilian reactors by January 1998. After DOE subsequently acknowledged that it would be unable to meet this deadline, a second lawsuit was filed by a group of 46 state regulatory agencies and 33 utilities, asking the Court to suspend collection of the nuclear waste fee and order DOE to develop a program to take used nuclear fuel in 1998 (*State of Michigan, et al. v. U.S. Dept. of Energy*). S. 104 includes a provision to make clear that the legislation is not intended to have any effect on the outcome of the lawsuits currently pending in that case, or any subsequent litigation regarding those contracts.

BILL PROVISIONS

Title I — Obligations

This title establishes the obligation of the Secretary of Energy to develop an integrated management system for accepting, transporting, storing, and disposing of spent nuclear fuel and high-level radioactive waste.

Title II — Integrated Spent Nuclear Fuel Management System

Transportation Provisions

This title provides that DOE is responsible for the transportation of the nuclear waste. Heavy-haul trucks would transport nuclear waste from the main rail line at Caliente, Nevada, to

the storage facility at the Test Site. The bill requires the Energy Department to improve existing roads between Caliente and the site for year-round safe transportation.

The Energy Secretary also must take all actions necessary, including logistical planning, to ensure safe waste acceptance beginning in November 1999. Key transportation provisions in S. 104 provide that:

- Only NRC-certified transportation containers may be used. (The Nuclear Regulatory Commission regulates container design and manufacturing to ensure that they maintain their integrity under routine transportation conditions and during severe accidents.)
- DOE is required to use Department of Transportation and Nuclear Regulatory Commission regulations to pick routes and modes of transportation and specifies certain considerations that are to be taken into account when DOT regulations do not apply. DOE is required to pick a "primary route" for transportation from each reactor or DOE site, and focus funding for emergency response training for states and Indian Tribes along the preferred routes. Except for emergency cases, DOE may not ship nuclear waste along routes if specified technical assistance and funding has not been provided.
- DOE will conduct a nationwide public education program on transport of spent nuclear fuel.
- The Hazardous Waste Materials Transportation Act (HMTA) shall apply to all shipments. [Under the HMTA, the Secretary of Transportation regulates highway routing, packaging, labeling, shipping papers, personnel training, loading and unloading, handling and storage, as well as transportation vehicle requirements. The HMTA provides that states may regulate shipments to the extent not preempted by federal law, and provides a mechanism for the designation of preferred routes by state governments. The NRC also examines shipping routes to ensure the security of spent fuel shipments.] S. 104 requires that the transportation of spent fuel under S. 104 shall be governed by all requirements of federal, state and local governments and Indian Tribes to the same extent that any person engaging in transportation in interstate commerce must comply with those requirements, as provided by the HMTA.
- The bill also requires the Secretary to provide technical assistance and funds for training to unions with experience with safety training for transportation workers. It also clarifies that existing employee protections concerning the refusal to work in hazardous conditions apply to this act, and provides that certain inspection activities only will be carried out if workers are adequately trained. The Transportation Secretary may establish training standards for workers.

Interim Storage Facility Requirements

This section also requires the DOE Secretary to begin placing nuclear waste in an interim storage facility no later than November 30, 1999, with certain contingencies that could delay this

deadline by about two years. DOE is prohibited from commencing construction of the interim facility until after December 1, 1998, but otherwise shall proceed with activities necessary to begin accepting the waste by the deadline.

The bill provides that an assessment of the viability of the Yucca Mountain site be provided to the President and Congress six months before the date the construction is scheduled to begin. No construction would take place if the site is deemed unsuitable as a repository and the President would have 18 months to designate an interim storage facility site. If he fails to designate a site, or if a site he has designated has not been approved by Congress within two years of his determination, only then would an interim facility be constructed at the Yucca Mountain Site.

Within 12 months of the date of enactment, the Secretary must apply for a license for the first phase of the interim storage facility, which will have a capacity of not more than 15,000 metric tons. Not more than 30 months after date of enactment, the Secretary must apply for a license for the second phase facility which will have a storage capacity of 40,000 metric tons, but that could be expanded to 60,000 metric tons if the Secretary fails to meet the deadlines relating to the permanent repository.

S. 104 requires the Nuclear Regulatory Commission (NRC) to prepare an Environmental Impact Statement (EIS) as required by the National Environmental Policy Act. The EIS will be required in connection with any licensing decision with respect to the interim storage facility. Essentially, the bill requires the NRC to treat the DOE's licensing application in the same way that it would any private applicant seeking an operating license. However, the bill does focus the EIS on the licensing issues rather than site selections issues, as site selection will have been determined by Congress in this legislation, or in any future legislation to approve the President's selection of an alternative interim site.

Nuclear waste (i.e., spent fuel) will first come from civilian nuclear power reactors, pursuant to contracts executed under the 1982 law. Ultimately, deposits will come from other sources, including reactors that have ceased operations; foreign research reactors; and fuel from naval reactors and high-level radioactive waste from defense activities.

Permanent Facility Requirements

The Secretary is required to apply to the Nuclear Regulatory Commission for the construction of the repository by December 31, 2002. If, prior to that time, the Secretary determines that the site cannot satisfy the licensing requirements, the Secretary shall terminate the site characterization, and notify Congress and the State of Nevada. The Secretary must also, within six months of that time, make recommendations to Congress of further actions needed to manage the nation's nuclear waste.

S. 104 provides that the repository may not release radioactivity at a maximum annual dose to an average member of the general population in the vicinity of Yucca Mountain that exceeds 100 millirem. This is the NRC's general public protection standard, and is fully

consistent with current national and international standards designed to protect public health and safety and the environment. S. 104 further provides that the Environmental Protection Agency may provide another standard if it finds that the 100 millirem standard would pose an unreasonable risk to the health and safety of the public.

The Secretary is also required to conduct research and report to Congress on alternatives for the permanent disposal of nuclear waste.

Intermodal Transfer Facility

S. 104 requires that the Secretary of Energy must construct an intermodal transfer facility.

Title III — Funding and Organization

This title continues the Nuclear Waste Fund, which was established under the Nuclear Waste Policy Act of 1982. It also reenacts provisions of the old law establishing the Office of Civilian Radioactive Waste Management; and it provides priorities for the spending of funds appropriated to nuclear waste.

Title III also provides financial and technical assistance grants for oversight activities and payments in lieu of taxes to affected units of local governments and Indian tribes in the state of Nevada. S. 104 also transfers certain Bureau of Land Management parcels to Nye County, Nevada.

Titles IV and V — General and Miscellaneous Provisions, Nuclear Waste Technical Review Board

These titles continue various provisions of the 1982 act, including the activities of the Office of Civilian Radioactive Waste Management and the Nuclear Waste Technical Review Board.

S. 104 changes the mandatory annual nuclear waste fee collected for the Nuclear Waste Fund beginning in Fiscal Year 2004 to a discretionary user fee that is dedicated for the purposes of the Nuclear Waste Program. The discretionary user fee will be assessed at levels approximating the level of appropriations for the Nuclear Waste Program for the year in which the fee is collected. In addition, the "one-time fee" required of nuclear utilities (which utilities may wait to pay until the stored spent fuel at the reactors is actually sent to the interim storage site) is accelerated to Fiscal Year 2002. [See "Cost," below.]

S. 104 requires that actions under the bill be governed by the Nuclear Waste Policy Act, the Atomic Energy Act, and the Hazardous Materials Transportation Act and any other requirement of Federal, state or local law that is not inconsistent with those acts.

S. 104 also authorizes the Secretary to take title to the spent fuel owned by Dairyland

Power Cooperative's La Crosse reactor, and authorizes the Secretary to pay for the on-site storage of the fuel until the DOE removes the fuel from the site under the Act. Energy Committee Chairman Murkowski and bill author Senator Craig observed in their July 10, 1996, Dear Colleague, that equity demands that the Department take title to the fuel promptly, because Dairyland is paying \$2.8 million per year to store the approximately 38 metric tons of the spent fuel, which the Department sold to Dairyland in 1973 for \$1.00. At that time, it was assumed that the fuel could be reprocessed and sold as new fuel, but reprocessing is no longer available in this country.

ADMINISTRATION POSITION

No official Statement of Administration Policy on S. 104 had been received at press time. S. 104 contains bipartisan language to address the Administration's stated objections to the predecessor bill during the 104th Congress. On February 27, 1997, Chairman Murkowski received a letter from Erskine B. Bowles, Chief of Staff to the President, that indicated that "the Administration is committed to resolving the complex and important issue of nuclear waste storage in a timely and sensible manner, consistent with sound science and the protection of public health, safety and the environment." The letter also repeated the warning issued in the Statement of Administration Policy last year, that the President "would veto any legislation that would designate an interim storage facility at a specific site before the viability of a permanent geologic repository at Yucca Mountain has been determined." Section 204(b) of S. 104 ensures that the construction of an interim storage facility at the Yucca Mountain site will not occur before the President and Congress have had an ample opportunity to review the technical assessment of the suitability of the Yucca Mountain site for a permanent repository and to designate an alternative site for interim storage based upon that technical information.

COST

S. 104 has not yet been scored by CBO. However, the scoring is expected to be almost identical to the memorandum prepared for the Senate Energy Committee dated July 9, 1996, in which CBO estimated the 10-year direct spending implications of S. 104. At that time, the CBO estimated that the acceleration of the "one-time fee" under the Nuclear Policy Act would yield \$2.7 billion in additional revenues in Fiscal Year 2002, but the bill's change of the mandatory nuclear waste fee to a discretionary fee beginning in Fiscal Year 2003 would reduce revenues by \$2.4 billion between Fiscal Year 2003 and 2006. CBO therefore concluded the net budgetary impact to be a gain of \$300 million during the period Fiscal Year 1997 through 2006. However, CBO added that annual reductions of \$600 million per year compared to current revenues from the mandatory nuclear waste fee would continue "for many years after 2006."

REGULATORY IMPACT

The Committee expects little or no regulatory impact as a result of this legislation. In general, the bill requires the use of current NRC and Hazardous Materials Transportation Act rules.

POSSIBLE AMENDMENTS

Bingaman. To replace milestones and licensing requirements in the bill.

Bingaman. To eliminate the provision preempting all inconsistent and duplicative federal, state, and local laws.

Bingaman. To give authority to the Secretary of Energy to adjust the Nuclear Waste Fee by rule, and create a new point of order against any bill that uses receipts to the Nuclear Waste Fund as an offset for non-nuclear waste program spending.

Bingaman. To provide a Congressional finding that DOE is not liable for its failure to take waste by the current 1998 deadline.

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